METHODS FOR ASSESSING THE IMPACT OF KEY SOCIO-ECONOMIC INDICATORS ON INDUSTRIAL DEVELOPMENT USING ECONOMETRIC MODELS (ON THE EXAMPLE OF SURKHANDARYA REGION)

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Industrial development in Uzbekistan is considered as one of the important directions in ensuring the development of the regions and bringing their economic potential closer to each other. Also, in the Annex 1 to the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 "On action strategy for further development of the Republic of Uzbekistan" PF-4947 "Strategy of actions on five priority areas of development of the Republic of Uzbekistan in 2017-2021" [1] to continue the policy of stimulating the localization of production and, first of all, to replace the import of consumer goods and components, to expand inter-sectoral industrial cooperation.

Economists have conducted a number of scientific studies aimed at determining how the industry is distributed in the region, taking into account structural changes and the characteristics of regional systems. Looking at industrial policy as different forms and forms of economic intervention in politics [4], industrial policy is based on the country's commodity and natural resource potential or government intervention in enterprises, the development of new industries that are not dependent on natural resources as a factor of production. the conflicting views of governments on neutral-horizontal policies have been investigated [4].

Research has shown that new industries in the region develop from existing processes and through a combination of unrelated knowledge and resources [5]. In addition, the assessment of the impact of industrial structure development on the natural environment, the analysis of mechanisms and the study of the proposed countermeasures are becoming one of the key issues of sustainable development [6]. New industrial policy is closely related to innovation policy and requires attention to the characteristics of the regional economy and places, diversification of industrial structure and entrepreneurial discoveries [6].

In our country, special attention is paid to ensuring employment on the basis of industrial development, launching the production of high value-added products, production of import-substituting and export-oriented products. In shaping the industrial policy of the country, attention is paid to the development of specific areas of industry, taking into account the existing opportunities and potential of territorial units. In this article, we consider the results of the measures taken in this regard using the example of Surkhandarya using various econometric methods. This is because the share of the region in the industrial output of the republic is the smallest, at 1.4%. In addition, the share of industry in GDP, including construction, is 18.5%, if we look at construction in isolation, this figure is 8.0.

The above results require the identification of factors influencing the development of industry in the region and the assessment of their levels of impact. Also, the identification of promising areas for industrial development in the region remains a pressing issue.

Using the elasticity coefficient determined on the basis of the regression analysis method, we want to assess the impact of important indicators of the region on industrial development (Table 1).

Table 1
Results of regression analysis

№	Model	Student criteria	Determination coefficient	Elasticity coefficient
1.	$\ln(Y) = -2.4 + 1.2 * \ln(X_1)$	b_1=-19.8 b_2=57.3	R^2=0.99	1.2
2.	$\ln(Y) = 1.8 + 0.6 * \ln(X_2)$	b_1=8.2 b_2=12.8	R^2=0.89	0.6
3.	$\ln(Y) = -3.9 + 1.6 * \ln(X_3)$	b_1=-18.4 b_2=40.1	R^2=0.99	1.6
4.	$\ln(Y) = 1.4 + 0.6 * \ln(X_4)$	b_1=10.9 b_2=23.2	R^2=0.97	0.6

Where, Y – is the real value of industrial output produced in Surkhandarya region (at 2000 prices); X_1 – real value of gross regional product produced in Surkhandarya region (at the price of 2000); X_2 – real value of investments in fixed assets (at 2000 prices); X_3 – real value of agricultural products produced in Surkhandarya region (at the price of 2000); X_4 – Real per capita income in Surkhandarya region.

To perform the above regression analysis, data from 2000-2020 were used and the indicators were converted to real values. Based on the results of the analysis, the cited models substantiate the adequacy, i.e. the adequacy of all the coefficients determined by the Student Criterion, while the coefficient of determination shows that there is a correlation between these indicators. Based on the results of the given criteria, we obtained the coefficients of elasticity using these models.

Conclusion

According to the results of the study, the increase in industrial production in the region is directly related to the socio-economic development of the region, and a one percent increase in GDP will increase industrial production by 1.2 percent. In addition, it was found that the impact of changes in the real volume of investments in fixed assets in the region on manufactured industrial products is much lower.

It was also found that the impact of agriculture on industrial development is strong, with the coefficient of elasticity between the two indicators having a value greater than one. This is the basis for considering the development of light industry in the region, which specializes in the processing of agricultural products, as one of the promising areas.

References.

1. Ўзбекистон Республикаси Президентининг 2017 йил 7 февралдаги “Ўзбекистон Республикасини янада ривожлантириш бўйича ҳаракатлар стратегияси тўғрисида”ги ПФ-4947-сонли Фармони
2. J. Stiglitz, J. Lin, C. Monga, E. Patel ‘Industrial Policy in the Context of Africa’, Policy Research Working Paper 6633 World Bank (2013)
3. T. Altenburg Industrial policy in developing countries, overview and lessons from seven country cases Discussion Paper 4/2011, German Development Institute, Bonn (2011)
4. J. Lin, H. Chang Should industrial policy in developing countries conform to comparative advantage or defy it? A debate between Justin Lin and ha-Joon Chang Dev. Policy Rev., 27 (5) (2009), pp. 483-502
5. F. Neffke, M. Henning, R. Boschma How do regions diversify over time? Industry relatedness and the development of new growth paths in regions Econ. Geogr., 87 (3) (2011), pp. 237-265
6. Kai Li, Xun Zhang, Joseph Y.-T. Leung, Shan-Lin Yang Parallel machine scheduling problems in green manufacturing industry J. Manuf. Syst., 38 (11) (2016), pp. 98-106